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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/880,100	06/14/2001	Andreas Birkner	016790-0407	3827

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EXAMINER

BRAHAN, THOMAS J

ART UNIT	PAPER NUMBER
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3652

DATE MAILED: 10/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/880,100

Applicant(s)

BIRKNER ET AL.

Examiner

Thomas J. Brahan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5,7-9 and 12-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5,7-9 and 12-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. The drawings are objected to under 37 C.F.R. § 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the pins and holes of claims 17-19 must be shown, or the features must be canceled from the claims. No new matter may be entered.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 5, 8, 9, and 12-20 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear as to how the applicant is considering the kinetic elements as providing an "immovable" connection, as now recited in claim 5. As the connection is also disclosed as permitting the wafer processing arrangement of being readily reconfigured, the connection is not completely immovable.

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. § 103, the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 C.F.R. § 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of potential 35 U.S.C. § 102(f) or (g) prior art under 35 U.S.C. § 103.

6. Claims 5, 8, 9, 14, 15 and 17-19, as best understood, are rejected under 35 U.S.C. § 102(b) as being anticipated by Slocum. Slocum shows a system made up of at least one substrate conveying module (the cassette loading and unloading stations shown at each end of the wafer processing arrangement of figure 2) and at least one workstation (the rigid frame 64 of figure 12) which has several side walls, substrates being exchangeable between the substrate conveying module and the workstation, wherein the workstation has, on at least two different side walls, kinematic coupling connecting elements (96-99) that coact with corresponding kinematic

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coupling connecting elements on at least one side wall of the substrate conveying module to provide for an immovable connection (to the same degree as applicant's connection is immovable) between the workstation and the substrate conveying module while simultaneously automatically aligning the workstation with the substrate conveying module. The modules on the workstation process wafers, as recited in claim 8. The workstation has permanent transfer points, as recited in claim 9, and has kinematic couplings on all four walls, as to have couplings on adjacent walls, as recited in claim 14. It conveys the substrates between one loading station and the workstation via only one side wall, as recited in claim 15. The kinematic coupling can be a pin engaging an oblong slot, see figures 20-22, as recited in claims 17-19.

7. Claims 5, 7-9 and 12-20, as best understood, are rejected under 35 U.S.C. § 103(a) as being unpatentable over Stark et al in view of Slocum et al. Figure 3 of Stark et al shows a system made up of at least one substrate conveying module (20a or 20b) and at least one workstation (31b, 31c, 31g, and 31f) which has several side walls, substrates being exchangeable between the substrate conveying module and the workstation, wherein the workstation has, on at least two different side walls, coupling connecting elements (at the gate valve) that coact with corresponding coupling connecting elements on at least one side wall of the substrate conveying module to provide connections between the workstation and the substrate conveying module while simultaneously automatically aligning the workstation with the substrate conveying module. Stark et al varies from the claims by not using kinematic coupling elements. The use of kinematic coupling elements is conventional in the art as disclosed by Slocum et al. It would have been obvious to a mechanic with ordinary skill in the art at the time the invention was made to modify the modular wafer handling system of Stark et al by using kinematic couplings, to provide easier exchange of modules, as taught by Slocum et al. The conveying modules (20a or 20c) have load ports, (10a-10g) as recited in claims 7, 12, and 20. The workstations process wafers, as recited in claims 8 and 13, and have permanent transfer points, as recited in claim 9. The kinematic couplings of the conveying modules would be on two different walls, as recited in claim 12, and the kinematic couplings of the workstations would be on adjacent walls, as recited in claim 14. Multiple configurations are possible, as recited in claim 13, including arrangements that convey the substrates between one loading station and the workstation via only one side wall, as recited in claim 15. Stark has two substrate conveying modules (20a and 20b) connected to mutual workstations (31b and 31c), as recited in claim 16. The kinematic couplings of Slocum can be a pin engaging an oblong slot, see figures 20-22, as recited in claims 17-19.

8. Applicant argues in the amendment filed July 8, 2004, that the Stark et al reference does not have connectors at the side walls. This argument is not understood, as the reference clearly teaches that the modules are interchangeable into different configurations, see column 6, lines 40-42, and shows screws (S₁ and S₂; see figure 4) as connections at the gate valves between the workstations and the conveying stations. Applicant's

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remaining remarks in the amendment have been considered, but are deemed non-persuasive, as detailed above in the rejections.

9. An inquiry concerning this communication should be directed to Thomas J. Brahan at telephone number (703) 308-2568. The examiner's supervisor, Ms. Eileen Lillis, can be reached at (703) 308-3248. The fax number for all patent applications is (703) 872-9306.



Thomas J. Brahan
Primary Examiner
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